

Amendments to the Specification:

Please change the title to:

APPARATUS FOR HUMIDIFICATION OF HYDROCARBON MIXTURES

Please add the following paragraph on page 1, prior to FIELD OF THE INVENTION:

This application claims the benefit, as a divisional application, of U.S. Application Serial No. 09/808,508, filed on March 14, 2001, the specification of which is incorporated herein in its entirety.

Please amend page 4, paragraph beginning at line 15, as follows:

15 The bed **12** is preferably formed from small beads **38** (not shown to scale) formed of an inert material, such as porcelain. Preferably, the beads are spherical in shape, although other configurations are also contemplated. In a preferred embodiment, the beads range in size from smaller at the bottom to slightly larger at the top of the bed. As shown in FIGURE 2, this size
20 configuration can be achieved using a lower layer **40**, in which the beads have a diameter of about 0.2-0.4 cm, an intermediate layer **42**, in which the beads have a diameter of about 0.5-0.8 cm and upper layer **44**, with 1.0-1.5 cm diameter beads. In another embodiment, the particles in the bottom layer have an average diameter of approximately 0.2 to 0.5 centimeters and the
25 particles in the top layer have an average diameter of approximately 1 to 1.5 centimeters. Alternatively, the beads may be of the same size throughout the column. Bead size and arrangement will depend on factors such as the height of the column and the desired flow rate through the bed **12**.

The paragraph beginning on page 6, line 11 is amended, as follows:

The exiting wet hydrocarbon blend may be mixed with additional dry blend, to achieve a desired dissolved water content, although other methods of combining the two streams are also contemplated. FIGURE 1 shows a static mixer **90** which combines wet and dry streams. For example, the water content may be reduced to 50% or 20% of the saturation limit by appropriate mixing of wet and dry blend streams. Specifically, a portion of the dry blend from the inlet line is fed via a direct line **92** to the mixer where it is mixed with the wet blend from the column. A valve **94** adjusts the portion of the dry blend which passes directly to the static mixer. The dry blend passing to the static mixer is preferably of the same hydrocarbon composition as that passing through the humidification column **10**, although the dry blend can have a different hydrocarbon composition. If a fully water-saturated hydrocarbon stream is required, the step of mixing with a portion of the dry blend may, of course, be eliminated. In one embodiment, the humidified hydrocarbon stream includes about 200 ppm water. By combining this humidified hydrocarbon stream with a second portion of a hydrocarbon stream, a humidified hydrocarbon stream having a moisture content of from about 10 to about 150 ppm is obtained.